REMARKS

By this Amendment, Applicants have amended claims 1, 5, 6, 10, and 11 to more appropriately define the invention. Applicants have canceled claims 2-3 and 7-9, without prejudice or disclaimer of the subject matter thereof. Claims 1, 4-6, and 10-11 are pending.

In the Office Action, the Examiner rejected claims 1-11 under 35 U.S.C. § 103(a) as unpatentable over Vinciarelli et al. (U.S. Patent No. 6,110,213), in view of Hart et al. ("Inter-Organization Computer Networks: Indications of Shifts in Interdependence," ACM SIGOIS Bulletin, Proceedings of the Conference on Office Information Systems, v. 11, Issue 2-3, March 1990). Applicants respectfully traverse this rejection, because a *prima facie* case of obviousness has not been established by the Examiner.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. M.P.E.P. § 2143, 8th ed., Revision of May 2004.

Claim 1 recites a method of producing a semiconductor device that includes, *inter alia*,

"generating a plurality of circuit patterns . . . including a circuit pattern generated by using a stored character projection (CP) aperture for charged-particle beam exposure and a circuit pattern generated by using the stored CP aperture and a CP aperture to be newly produced, and obtaining a plurality of design parameters for each of the circuit patterns, and calculating a cost and a delivery time period for each of the circuit patterns, the cost including a cost for producing the CP aperture to be newly prepared."

Vinciarelli et al. and Hart et al., taken alone or in combination, fail to teach or suggest at least such an element of claim 1.

Vinciarelli et al. teaches "[a]n automated custom power supply design and manufacturing system [that] uses an expert system containing a set of rules, including manufacturing limitations to limit design choices and ensure feasibility and manufacturability of the design. A design interface collects specifications from a user. . . . After an order is received, a computer integrated manufacturing system generates all of the specifications required to manufacture the components for the system and the system." Vinciarelli et al., ABSTRACT. Vinciarelli et al.'s disclosure does not teach or suggest the use of a CP aperture. Therefore, Vinciarelli et al. fails to teach or suggest at least "generating a plurality of circuit patterns . . . including a circuit pattern generated by using a stored character projection (CP) aperture for charged-particle beam exposure and a circuit pattern generated by using the stored CP aperture and a CP aperture to be newly produced, and obtaining a plurality of design parameters for each of the circuit patterns, and calculating a cost and a delivery time period for each of the

circuit patterns, the cost including a cost for producing the CP aperture to be newly

prepared," as recited in claim 1.

In addition, Hart et al. relates to inter-organization computer networks (ION) and

describes in relevant parts how IONs may be used in semiconductor circuit designs.

For example, Hart et al. illustrates interactions between semiconductor producers and

photomask shops, including photomask production (placing mask order, transferring

technical instructions, etc.), production control, and quality control, etc. See Hart et al.,

pp. 81-82. Hart et al. does not teach the use of a CP aperture and therefore fails to

cure the above-mentioned deficiencies of Vinciarelli et al. with regard to claim 1.

As a result, claim 1 is patentable over Vinciarelli et al. and Hart et al. Claims 4

and 5 depend from claim 1 and are also patentable over Vinciarelli et al. and Hart et al.

at least because of their dependence from an allowable base claim.

In addition, claim 6 recites, *inter alia*,

> "transmitting the specifications of the semiconductor device to a server,
>
> and causing the server to generate a plurality of circuit patterns based on the
>
> specifications of the semiconductor device, the circuit patterns including a circuit
>
> pattern generated by using a stored CP aperture for charged-particle beam
>
> exposure and a circuit pattern generated by using the stored CP aperture and a
>
> CP aperture to be newly produced, and to obtain a plurality of design parameters
>
> for each of the circuit patterns."

Claim 10 recites, *inter alia*,

> "the second instruction means generates a plurality of circuit patterns
>
> based on the specifications of the semiconductor device, the circuit patterns

including a circuit pattern generated by using a stored CP aperture for charged-particle beam exposure and a circuit pattern generated by using the stored CP aperture and a CP aperture to be newly produced, and obtains a plurality of design parameters for each of the circuit patterns."

Claim 11 recites, *inter alia*,

"a second program code portion which is configured to generate a plurality of circuit patterns based on the specifications of the semiconductor device, the circuit patterns including a circuit pattern generated by using a stored CP aperture for charged-particle beam exposure and a circuit pattern generated by using the stored CP aperture and a CP aperture to be newly produced, and obtain a plurality of design parameters for each of the circuit patterns."

For reasons already set forth above regarding claim 1, Vinciarelli et al. and Hart et al., taken alone or in combination, fail to teach or suggest at least these elements of claims 6, 10, and 11. Therefore, claims 6, 10, and 11 are patentable over Vinciarelli et al. and Hart et al.

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims 1, 4-6, 10, and 11.

Please grant any extensions of time required to enter this response and charge

any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: March 29, 2005   By:_____
                                    Qingyu Yin*

*With limited recognition under 37 C.F.R. § 10.9(b)